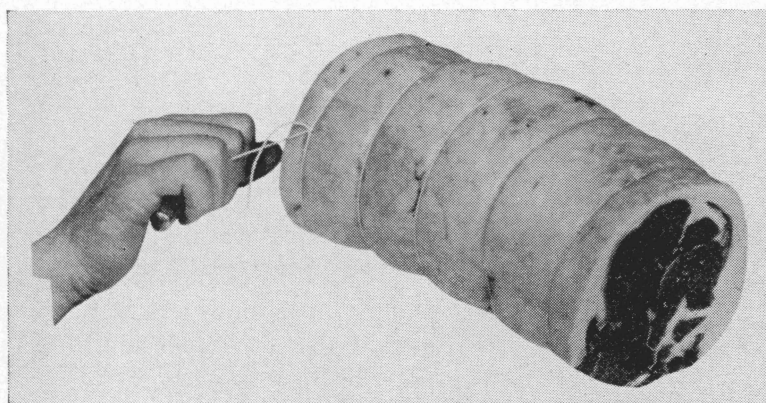
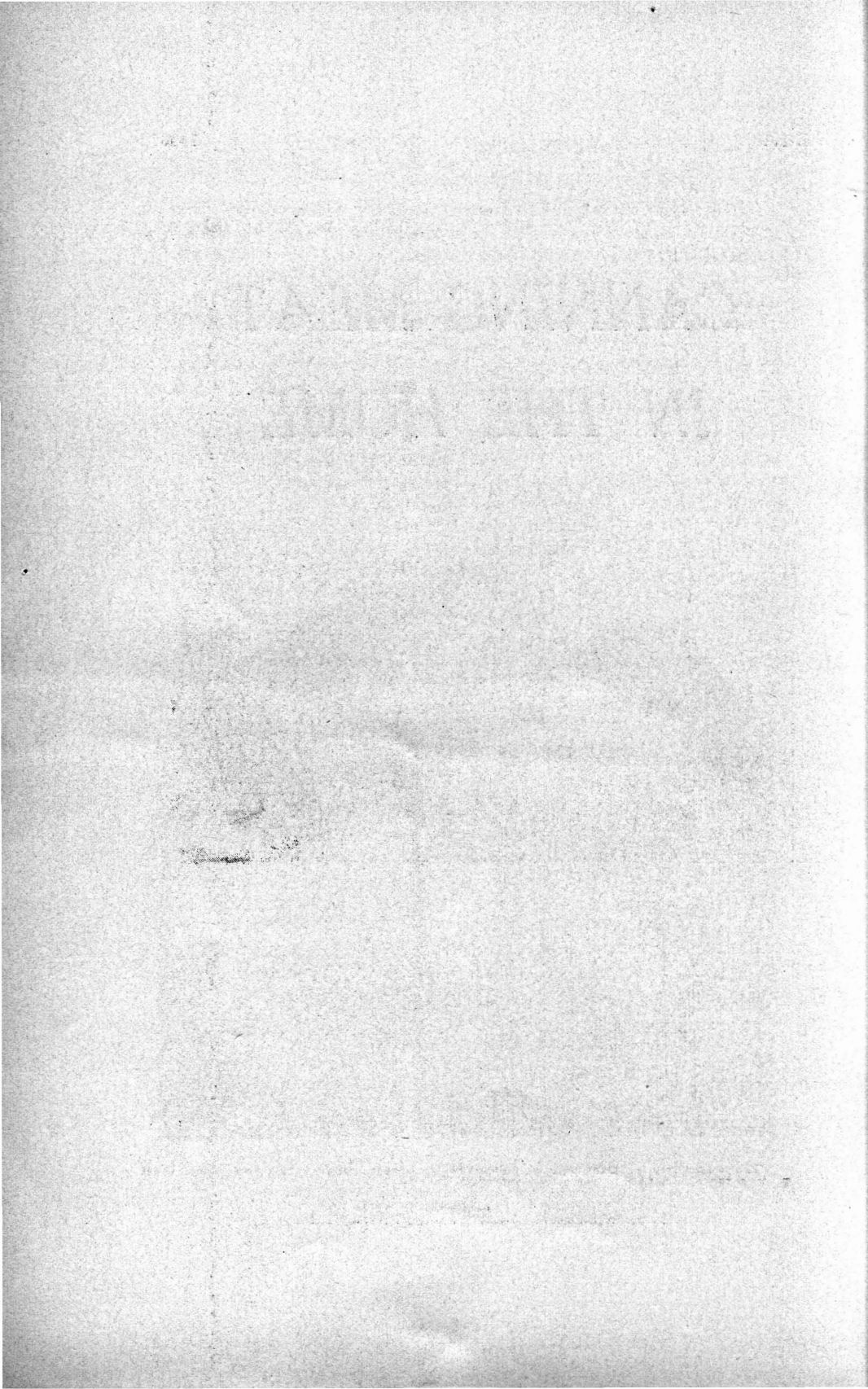


# CANNING MEAT IN THE HOME



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## Canning Meat in the Home

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**C**ANNED MEAT can be no better than the meat canned. This is determined by kind, or breeding, degree of fatness, and age of the animal slaughtered.

The meat is better in quality if it is allowed to remain in cold storage two or three days for ripening.

### CHILL MEAT FOR CANNING

The meat should be chilled as rapidly as possible. After dressing hang the carcass in a cool place until the following day before cutting into pieces for canning. Do not allow the meat to freeze solidly.

Meat should be canned as quickly as possible after it is removed from cold storage because pieces of meat that are cold do not tend to develop spoilage bacteria as quickly as warm pieces of meat.

It is important at all times to prevent the meat from standing at a temperature between 105 degrees F. and 150 degrees F., as this is the best breeding temperature for objectionable bacteria, which affect food preservation.

### PROCESS MEAT UNDER PRESSURE

The U. S. Department of Agriculture and the Texas A. and M. College Extension Service recommend that all meats canned be processed under steam pressure.

### PRECAUTION IN USING CANNED MEAT

Further protection in the use of canned meat is provided by boiling the meat 10 minutes in an open kettle as soon as it is emptied from the can. This boiling of meat after



The tenderness of meat can be conserved by proper cutting, but good meat must go into the can before it can come out of it.

opening is protection in case any toxins may have been formed in the can.

Two types of spoilage may occur in canned meats: putrefaction which announces itself by a disagreeable odor; and botulinus poisoning, which develops from certain toxins formed in the meat by the botulines organism; this spoilage is less readily detected in the initial stages and is deadly. Prevention of spoilage is accomplished by canning at temperatures above the boiling point as indicated in the discussion of the pressure cooker.

### BE CLEAN AND CAREFUL

It is important that all meat be handled in a strictly sanitary way. Table tops and utensils must be cleaned thoroughly in advance. Wash wooden equipment with hot soapy water then rinse with boiling water. Wooden equipment which is not well cleaned is a very dangerous source of spoilage bacteria.

Pans and kettles in which the meat is to stand should be of enamel ware, aluminum, retinned metal or stainless metal. Copper and iron may discolor meat. The meat left in a galvanized container for over half an hour is likely to take up a harmful amount of zinc.

If galvanized tubs or buckets are to be used they should be lined with plain paper or a cloth to prevent meat from coming in contact with the metal.

### THERE ARE MANY SUITABLE CONTAINERS

Tin cans or glass jars may be used for canning meats.

Each recipe given in this bulletin

suggests the type and size of can or jar to use for various products.

Successful use of glass jars depends upon the rims being free from nicks and chips, upon the quality of rubber rings or composition tops used, and upon tops fitting tightly.

After filling the containers seal each kind as follows:

When a screw top jar is used, use a new clean rubber and screw the lid on firmly. New lids and rubber rings each year are desirable.

When a glass top jar with a wire clamp is used, place the rubber and lid on evenly and raise both clamps. Then pull down the lower clamp.

When an automatic seal jar is used, fasten the lid with the clamp—it is self sealing as it cools.

For the glass jars with two piece caps which consist of screw band and lid with sealing composition attached, place the lid on the jar, and turn the screw band down firmly. Do not tighten after processing.

Lids for cans have three types of gaskets; paper composition, and rubber. Keep the ones with the paper gaskets dry until cans are sealed.

The sealer should be adjusted and checked to give an air-tight seal. Adjust the sealer when changing from one type of lid to another.

### CHECK GAUGES ON PRESSURE COOKERS

Check the gauges on pressure cookers with a maximum thermometer at least once a year; oftener would be better. This thermometer should be inclosed in a metal case to prevent breaking so easily.



Before using check the maximum thermometer by holding the bulb end well under boiling water. Boil for a few minutes and if the reading remains 212 degrees F. or 100 degrees C. then the thermometer is correct for these tests.

Readings should be adjusted to altitude according to the table appearing on page 7.

Shake the mercury down in the thermometer each time after using it; and each time before using see that the mercury is below 228 degrees F.

For checking the gauges prepare the pressure cooker as for canning. Place the metal jacketed maximum thermometer in an empty jar and set it in the center of the

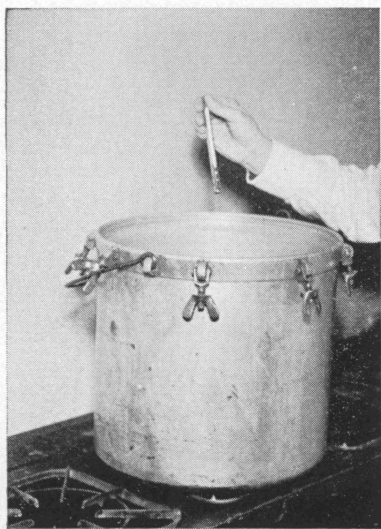
the steam escape for 7 minutes in a steady stream or until the reading on the dial reads  $1\frac{1}{2}$  to 1 pound pressure before closing the petcock. Close the petcock, and when the gauge reads 10 pounds or 240 degrees F. hold at this temperature for 5 minutes; remove at once from the heat. Let the gauge return to 5 pounds pressure; after which open the petcock slowly. When the dial registers zero, open the cooker carefully. The thermometer reading should be 240 degrees F. Repeat this test for 15 pounds of pressure, which would be 250 degrees F. and 5 pounds which would be 228 degrees F.

#### PREPARE CAREFULLY FOR CANNING MEATS

Cut for tenderness. The tenderness of meat can be preserved by proper cutting. For roasts the pieces should be cut large enough to fit in the can after the shrinkage of pre-cooking. The muscle fiber should run lengthwise of the piece of meat. This permits slicing across the grain. Steak should be cut about three-fourths inch thick. The less tender parts may be cut into small cubes for stew or hash or ground for meat loaf, chili or hamburger.

#### PREHEATING OR EXHAUSTING THE AIR

Either Precooking or Exhausting the air in the meat and the container is a necessary part of the processing period when using this bulletin. Precooking is heating the meats to almost boiling or 170 degrees F. or above in a kettle to shrink and to drive air out of it before filling and sealing contain-



Test the safety of pressure cookers with a maximum thermometer once a year.

pressure cooker on the rack, or suspend in the pressure cooker. Close the cooker, place it on the fire, **exhaust the air** by letting

ers. Exhausting is heating the meat in the container to 170 degrees F. or long enough to drive the air out of the food and the container before sealing. Follow special directions given under each recipe.

#### SEASON BEFORE SEALING

Pepper can be added to salt in all recipes if desired. A good proportion is  $\frac{1}{4}$  pepper to  $\frac{3}{4}$  salt. It is best to put seasoning in container before adding meat, but if placed on the top of the meat seal and invert can for processing.

#### CLOSING TEMPERATURES SHOULD BE HOT

Meat should be at least 170 degrees F. when sealed into the containers. If no thermometer is available judge the temperature by the meat being practically boiling hot when sealed. This temperature is necessary to drive sufficient air

out of the meat. Exhausting the air as given under recipes and sealing containers quickly when they are removed from the pressure cooker has been found to give the desired 170 degrees F.

#### ADJUST THE OPERATION TO ALTITUDE

Water boils at sea level at 212 degrees F. As the altitude increases, the temperature at which water will boil gradually decreases.

This table gives the number of pounds pressure that should be added to the pressure given in the time table when processing in the pressure cooker. The processing time remains the same.

#### PROCESS IN THE STEAM PRESSURE CANNER

Put in the rack that holds the jars. Pour boiling water into the cooker  $1\frac{1}{2}$  to 2 inches.



A good seal is necessary for good keeping.

Elevation Feet Above Sea Level	Boiling Point of Water F. Degrees	Extra Lbs. Pressure Added When Processing in the Pressure Cooker
500	211	1
1000	210	1
2000	208	1
3000	206	2
4000	204	2
5000	202	3
6000	201	3
7000	199	4

When the pressure cooker has been filled with containers of meat, adjust the cover and fasten it securely. In case the cover is fastened by several clamps, fasten moderately tight those opposite each other, one pair at a time. Then go back over the whole set and tighten each pair.

Allow the petcock to remain open until steam escapes from it in a steady stream for **seven minutes** or until pressure comes up **one pound** indicating that no air remains inside.

Then close the petcock. Be sure no steam is escaping so that the cooker will not boil dry and be damaged. Allow the pressure to rise until the gauge registers the pressure that indicates the temperature given in the recipes. Count processing time from the moment the desired temperature and pressure are reached.

Maintain a uniform pressure during the processing period by regulating carefully the source of heat. Fluctuations in pressure are to be avoided in any case, and when canning in glass may result in a loss of liquid. A sudden drop in pressure through cooling or release of steam may also cause this. It is especially important to avoid having the pressure go so high that

the safety valve releases the steam suddenly, nor should the steam be allowed to escape suddenly by opening the petcock.

At the end of the processing period remove the cooker from the fire and proceed according to the following directions adapted to jars or cans:

For No. 2 cans or smaller, open the petcock slowly; as soon as the dial registers zero, open the cooker and remove the cans at once and plunge them immediately into cold water.

When using glass jars or No. 3 cans, allow the cooker to cool until the steam gauge registers zero, open gradually, or let stand a few minutes. This is to prevent too sudden a drop in pressure which would cause the liquid to be drawn out of the jars. The cans may split under the sudden pressure. Leaving the jars in the cooker for 3 to 4 minutes after the cooker has been opened will reduce the danger of breakage.

When rubber rings are used, tighten the lids when removed from pressure cooker after processing. Allow jars to cool quickly, away from drafts. Plunge tin cans immediately into cold water to cool. The more rapidly the cans are cooled the less danger there is of overcooking the product. Watch carefully for air bubbles that indicate an imperfect seal.

All cans and jars should be labeled and marked as to cut for quality. This facilitates better use of canned meats.

After cooling all cans and jars should be stored in a cool, well ventilated dry place to prevent the fat from becoming rancid.

## PORK, BEEF, LAMB, AND CHEVON

### Sausage

25 lbs. pork (4 parts lean, 1 part fat)

1 cup salt

3 tablespoons black pepper

If desired add

$\frac{3}{4}$  cup sage

2 tablespoons red pepper

1 cup brown sugar

The seasoning should be mixed with the cut meat before it is ground.

This sausage may be made into cakes, stuffed into casings or packed in bulk into the container. Sear cakes and casings if desired in deep hot fat or in a pan in the oven until brown. Stuffed casings can be smoked and cured before canning if desired.

Exhaust at 10 pounds of pressure No. 1 cans or  $\frac{1}{2}$  pint jars 15 minutes, No. 2 cans or pint jars 25 minutes, No. 3 cans or quart jars 35 minutes. Seal immediately.

Process at 15 pounds pressure: No. 1 cans 50 minutes, No. 2 cans 65 minutes, No. 3 cans 80 minutes and pint glass jars 75 minutes, quart glass jars 90 minutes.

### Hamburger

25 lbs. raw ground beef meat

3 tablespoons red pepper

1 cup salt

Use the same method of mixing, seasoning, packing, exhausting and processing as for sausage.

### Roasts

Roasts should be cut large enough to fit the cans after shrinkage, or when there is excess shrinkage after exhausting one container can be used to finish filling the other cans.

Rolled roasts are usually preferred from the forequarter of beef or lamb. Remove all bones before rolling and tying. Cut in lengths which will fit into the container. Sear quickly in deep hot fat if



Meat should be very hot when sealed into the can; and it should be processed immediately after sealing.



desired. Put  $\frac{1}{2}$  tsp. salt in No. 1 cans or  $\frac{1}{2}$  pint jars, 1 tsp. salt in each No. 2 can and pint jars and  $1\frac{1}{2}$  tsp. salt in each No. 3 can before adding meat.

Exhaust at 10 pounds pressure: No. 1 cans or  $\frac{1}{2}$  pint jars 15 minutes, No. 2 cans or pint jars 25 minutes, No. 3 cans or quart jars 35 minutes. Seal immediately.

Process at 15 pounds of pressure: No. 1 cans 50 minutes, No. 2 cans 65 minutes, No. 3 cans 80 minutes, pint glass jars 75 minutes and quart glass jars 90 minutes.

### **Steak, Pork Chops, and Spareribs**

Steak, pork chops, and spareribs, sear in deep hot fat if desired. Add  $\frac{1}{2}$  tsp. salt per No. 1 can or  $\frac{1}{2}$  pint jar; 1 tsp. salt to No. 2 cans or pint jars and  $1\frac{1}{2}$  tsp. salt per No. 3 cans or quart jars.

Exhaust at 10 pounds of pressure: No. 1 cans and  $\frac{1}{2}$  pint jars 15 minutes, No. 2 cans and pint jars 25 minutes, and No. 3 cans and quart jars 35 minutes. Seal immediately.

Process at 15 pounds pressure: No. 1 cans 50 minutes, No. 2 cans 65 minutes, No. 3 cans 80 minutes and  $\frac{1}{2}$  pint jars 60 minutes, pint jars 75 minutes and quart jars 90 minutes.

### **Head Cheese**

Clean hog's head thoroughly by washing and scraping at the time of scraping the whole carcass. Remove eyes, burr of ears and bones which contain cavities. Trim off excess fat from jowls. Soak in cold water over night. Cook in pressure cooker with 2 cups of water at 15 pounds pressure for 40 minutes. Grind meat using coarse plate. Sea-

son to taste. Pack into suitable containers for molding, weight and press if the cheese is to be used fresh.

For canning, the cheese is pre-heated by heating to near boiling temperature or 170 degrees F. when packed into container. Seal immediately.

Process at 15 pounds of pressure: No. 1 cans 55 minutes, No. 2 cans 65 minutes, pint glass jars 75 minutes.

### **Mince Meat**

The head may be made into mince meat if preferred.

5 cups ground beef  
5 cups brown sugar  
 $\frac{1}{2}$  cup vinegar  
6 medium sized oranges  
6 large lemons  
Peel of 2 lemons and 2 oranges  
 $2\frac{1}{2}$  cups raisins  
 $2\frac{1}{2}$  cups currants  
1 tablespoon mace  
2 tablespoons allspice  
2 tablespoons cinnamon  
2 tablespoons cloves

Wash currants, raisins, oranges and lemons and let drain. Mix sugar and spices. Peel lemons and oranges. Cut pulp into small uniform pieces, and run the peel through a food chopper using medium knife. Mix all ingredients together.

Preheat by heating to boiling temperature, or 170 degrees F., place in standard enamel tin cans or glass jars.

Process immediately at 15 pounds pressure: No. 1 cans at 50 minutes, No. 2 cans 65 minutes, pint glass jars 75 minutes.

### Liver Paste

- 3 pounds of veal or beef liver
- 1½ pounds of fresh pork  
(1-5 fat, 4-5 lean)
- 2 tablespoons salt
- 3 eggs
- 1 teaspoon black pepper
- 1 teaspoon cloves
- 1 cup chopped onion
- 1 cup toasted bread or cracker  
crumbs

Run the meat and seasoning through meat choper. Beat eggs and mix all together.

Preheat by heating to boiling temperature or 170 degrees F. Fill cans and seal immediately.

Process at 15 pounds pressure, No. 1 cans 55 minutes, No. 2 cans 70 minutes, and pint glass jars 80 minutes.

### Scrapple

The head, heart, tongue and bones may be used. Place in steam pressure cooker, add about 1 quart of water and steam 45 minutes under 15 pounds pressure. Remove the meat from the bones and grind. Strain the stock and let it set until the fat rises to the top. Skim excess fat off. Heat to boiling and add to a cereal mixture, made by mixing equal parts of corn meal, whole wheat or buckwheat and shorts. Add only enough stock to make a very stiff mixture. Add the ground meat which has been reheated. Equal proportions of meat and cereal mixture make a very tasty product.

Preheat by heating to boiling temperature or 170 degrees F. Fill containers and seal immediately.

Process under 15 pounds pressure No. 1 cans 60 minutes, No. 2

cans 70 minutes, and pint glass jars 80 minutes.

### Pickled Pigs Feet

Clean pig's feet carefully. Place in pressure cooker. Add water and process under 10 pounds pressure 60 minutes. Remove from cooker and place in stone jar; weight and cover with spiced vinegar made as follows:

- ½ gallon vinegar (pure apple cider)
- 1½ tablespoons of celery seed
- ½ cupful of grated horseradish
- 1 cup sugar
- 1½ tablespoonfuls of mustard seed
- 1 tablespoon of salt
- 1 onion ground fine
- 1 teaspoon whole cloves
- ½ stick cinnamon

Mix all dry ingredients, tie in a bag, add to vinegar and bring to the boiling point. Cover and let spice infuse for one or two hours. Remove the bag of spices, heat and pour the vinegar over the feet.

Preheat by heating to about boiling or 170 degrees F. Pack into standard enamel lined cans or glass jars and seal immediately.

Process under 15 pounds pressure: No. 2 cans 70 minutes and quart glass jars 80 minutes.

### Swiss Steak

Cut round steaks 1 inch thick and sear. Cut in pieces which will fit into the containers, using for cutter a can which has been cut and not reflanged. Pack into containers. Sprinkle each piece with chopped onions. Mix 2 tablespoons bacon drippings, 1 tablespoon of browned flour with ½ cup of hot tomato juice for each container. Finish filling with hot tomato juice.

Exhaust at 10 pounds of pressure  
No. 2 cans or pint jars 25 minutes,  
No. 3 cans or quart jars 35 minutes.  
Seal immediately.

Process at 15 pounds pressure:  
No. 2 cans 60 minutes, No. 3 cans  
75 minutes, pint jars 70 minutes  
and quart jars 85 minutes.

### Stew

12 lbs. stew meat  
4 tsp. celery seed  
3 cups finely chopped onion  
6 tablespoonfuls salt

Cut into cubes 1 or 1½ inches  
thick. Sear in small amount of fat  
until white. Add onions and salt.  
If tomatoes, carrots, parsnips or  
turnips are desired, they may be  
diced and added in the proportion  
of ½ cup to each pound of meat  
used. Preheat by heating to near  
boiling point or 170 degrees F. Seal  
immediately.

Process at 15 pounds of pressure:  
No. 1 cans 50 minutes, No. 2 cans  
60 minutes, and No. 3 cans 70  
minutes, ½ pint jars 60 minutes,  
pint jars 70 minutes and quart  
jars 80 minutes.

### Chili

15 pounds meat ground coarsely  
7 cups finely chopped onion  
½ cup of finely chopped garlic  
4 cups of fat  
3¾ cups of chili powder or pepper  
pulp  
½ cup salt  
4 tsp. comino seed  
Add water for desired consistency

Melt fat and fry onions and gar-  
lic until a golden brown. Add meat  
and sear until white, then add chili  
powder or pepper pulp, salt, comino  
seed and water. Cook until no  
blood is visible when larger pieces

of meat are cut. Fill container with  
hot chili at least 170 degrees F.,  
seal immediately.

Process at 15 pounds of pressure:  
No. 1 cans 50 minutes, No. 2 cans  
60 minutes and pint glass jars 70  
minutes.

### Cook Bones In Pressure Cooker

Fill cooker with bones. Add 2  
quarts of water. Process at 10  
pounds pressure for 50 minutes or  
steam until the meat will slip.  
Strain broth from soup stock and  
let cool. Meat can be used for hash  
or meat loaf.

### Hash Meat

Remove the meat from the gristle  
and bone.

Preheat by bringing to boil or  
170 degrees F., pack hot into con-  
tainer, cover with hot broth, and  
seal immediately.

Process at 15 pounds pressure:  
No. 1 cans 55 minutes, No. 2 cans  
65 minutes, and pint glass jars 75  
minutes.

### Meat Loaf

5 pounds of meat  
5 tablespoons of bread crumbs  
2 tablespoons of salt  
1 tsp. pepper  
1 tsp. sage  
1 tsp. celery seed  
2 tablespoons finely chopped onion  
2 eggs, beaten together

Grind the meat and mix thor-  
oughly with the seasoning. One or  
two cups of broth may be added,  
according to the dryness of the  
meat.

Preheat by heating to near boil-  
ing point or 170 degrees F.; fill  
containers. Seal immediately.

Process at 15 pounds pressure:  
No. 1 cans 50 minutes, No. 2 cans

65 minutes, and pint glass jars 75 minutes.

### **Soup Stock**

Skim excess fat from bone broth. Strain, heat and pour into containers. If bones are cooked in the pressure cooker, broth will not need to be concentrated. If covered with water and boiled in open kettle, the broth should be boiled down until it will congeal when cold.

Preheat by bringing to boil. Seal immediately.

Process at 15 pounds pressure: No. 1 cans 20 minutes, No. 2 cans 25 minutes, No. 3 cans 40 minutes, and pint glass jars 30 minutes.

### **Brains**

Soak in several waters to draw out the blood. Remove the membranes. Fry in hot fat. Sprinkle with salt and pepper.

Preheat by bringing to near boil, or 170 degrees F., seal immediately.

Process at 15 pounds pressure: No. 1 cans 55 minutes, No. 2 cans 65 minutes, and pint glass jars 75 minutes.

### **Sweet Breads**

Clean and soak in several changes of cold water for about two hours. Drain and boil for about five minutes in salty water. Pack into containers and add about 4

tablespoons of hot water; or broil in butter or bacon drippings, and add two tablespoons of fat in which they were broiled.

Preheat by bringing to near boil, or 170 degrees F., seal immediately.

Process at 15 pounds pressure: No. 1 cans 50 minutes, No. 2 cans 60 minutes, and pint glass jars 70 minutes.

### **Tongue**

Clean, boil and skin. Pack into containers with 4 tablespoons of broth.

Exhaust at 10 pounds of pressure: No. 1 cans 15 minutes, No. 2 cans or pint jars 25 minutes; seal immediately.

Process under 15 pounds of pressure: No. 1 cans 50 minutes, No. 2 cans 60 minutes, and pint glass jars 70 minutes.

### **Heart**

Trim the heart and remove the small white tendons from inside. Wash out all blood clots. Pre-cook in salt water, pack hot about 170 degrees F., into containers, add 4 tbsp. of broth, and seal immediately.

Process at 15 pounds pressure: No. 1 cans 50 minutes, No. 2 cans 60 minutes, No. 3 cans 70 minutes, and pint glass jars 65 minutes.